

CLAIMS

1. Switching device (2) for a multi-step vehicle transmission (4) having one main transmission part (6) and at least one auxiliary-section transmission part (10) and comprising switching means (12, 14, 18, 38) for actuating switching elements (44, 50, 52, 54) in the main transmission part (6) and switching means (12, 14, 18, 38) for actuating switching elements (42, 46) in the auxiliary-section transmission part (10), characterized in that the switching means (12, 14, 18, 38) for actuating the switching elements (44, 50, 52, 54) in the main transmission part (6) also actuate the switching elements (42, 46) in the auxiliary-section transmission part (10).

2. Switching device (2) according to claim 1, characterized in that the switching means (12, 14, 18, 38) for actuating the switching elements (44, 50, 52, 54) in the main transmission part (6) comprise a pneumatic, hydraulic or electric actuator (12) for carrying out a switching command.

3. Switching device (2) according to claim 1 or 2, characterized in that the switching means (12, 14, 18, 38) for actuating the switching elements (44, 50, 52, 54) in the main transmission part (6) comprise a pneumatic, hydraulic or electric actuator (18) for carrying out a selection command.

4. Switching device (2) according to claim 2 or 3, characterized in that the actuator (12, 18) is controlled by automation based on commands processed in a control device (37) according to preset rules.

5. Switching device (2) according to any one of claims 1 to 4, characterized in that the switching means (12, 14, 18, 38) have a clearance (40) in which one element (38) of the switching means which actuates the switching elements (42, 44, 46, 50, 52, 54), during a selection procedure for choosing the desired switching element (42, 44, 46, 50, 52, 54), can be moved in direction to a switching operation.

6. Switching device (2) according to claim 5, characterized in that the actuator (12) for carrying out the switching command can be controlled with at

least parts of the selection command for carrying out the selection procedure in direction of the switching operation.

7. Switching device (2) according either to claim 5 or 6, characterized in that on the clearance (4) one switching element (42) of the auxiliary-section transmission part (10) abuts on one side and one switching element (44) of the main transmission part (6) abuts on the other side.

8. Switching device (2) according to any one of claims 1 to 7, characterized in that the switching elements (42, 46) of the auxiliary-section transmission part (10) are synchronized switching elements.

9. Switching device (2) according to any one of claims 1 to 8, characterized in that the switching elements (42, 46) of the auxiliary-section transmission part (10) comprise one dog clutch engagement without synchronization elements.

10. Switching device (2) according to claim 9, characterized in that in the presence of a dog clutch engagement without synchronization elements, the switching elements (44) of the main transmission part (6) located next to the clearance (40) are switching elements for the highest and the lowest ratio step of the main transmission part (6).

11. Switching device (2) according to any one of claims 1 to 10, characterized in that the switching means (12, 14, 18, 38) for actuating the switching elements (44, 50, 52, 54) in the main transmission part (6) comprise one single selector shaft (14).

12. Switching device (2) according to any one of claims 1 to 10, characterized in that the selector finger (38) is directly connected with the switching means (12, 18) for carrying out a switching motion and a selection motion.